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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,569	04/05/2001	Wray Russ	033131-007	6498
7590	11/04/2003		EXAMINER	
Kevin H. Fortin BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404			KLIMOWICZ, WILLIAM JOSEPH	
			ART UNIT	PAPER NUMBER
			2652	13
DATE MAILED: 11/04/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/828,569	RUSS, WRAY
	Examiner William J. Klimowicz	Art Unit 2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 26 September 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-6 and 10-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6, 10, 11, 15-18 and 21-32 is/are rejected.
- 7) Claim(s) 12-14, 19 and 20 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on 26 September 2003 is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All
  - b) Some \*
  - c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____                                     |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 26, 2003 (as Paper No. 11) has been entered.

Claims 1-6 and 10-32 are currently pending.

Claims 7-9 have been cancelled.

### ***Drawings***

The corrected drawing sheet representing Figure 20 was received on September 26, 2003 (as Paper No. 12). This drawing correction has been approved.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following phrase(s) lack clear antecedent basis within the claim(s), i.e., either the particularly recited passage fails to be properly introduced prior to its appearance at that point in the claim or the structure recited in the passage is not an inherent part of or component of the previously recited structure:

- (i) Claim 2 (line 6), "the linkage assembly."

Note that although the last line of claim 6 (line 8), includes the phrase "a linkage assembly," this phrase must be inserted into claim 2 such that it precedes the recitation of "the linkage assembly" of line 6 in order to obviate this rejection.

Additionally, since claims 3-6 are depend directly or indirectly from claim 2, they too are thus rejected under the second paragraph of 35 U.S.C. § 112.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10, 11, 15-18, 21, 23, 25-30 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (US 5,415,519).

As per claims 1,10, 17, 21 and 28, Lee et al. (US 5,415,519) discloses a memory storage disk handling system (14), comprising: a housing (20); an elevator pin (30, 35) mounted on the housing (14) for lifting disks (15) into a stack (16); a servo motor (76) attached to the housing (14); and a linkage assembly (e.g., including, *inter alia*, 77, 78) attached between the servo

motor (76) and the elevator pin (30, 35), wherein the elevator pin (30, 35) presses a single disk (15) into the stack (16).

As per claim 10, the housing (14) defines a hopper (80) for receiving disks (15, 16); an elevator pin (30, 35) mounted on the housing (14) for lifting disks (15, 16) into the hopper (80); and the hopper (80) being configured for aligning lifted disks (15) into a stack (16) and includes at least one pawl (55 and/or 59) for holding lifted disks (16) in the hopper (80).

As per claim 11, wherein the hopper includes hollow portions (e.g., portions of the bin which allow pawls (55 and/or 59) to project to the interior thereof, as seen in FIG. 4) and at least two pawls (55 and/or 59 - two sides of bin (80)), the pawls being slidably mounted (pivot) within the hollow portions.

As per claim 15, wherein each pawl (55 and/or 59) includes a slot (e.g. 60) and the hopper includes pins (e.g., screws that affix (59) to bin (80)) that insert through the slots to hold each pawl, the pins and slots cooperate to enables the pawls to slide.

As per claim 16, wherein each pawl (55 and/or 59) includes an end with a hook (57) for holding lifted disks (16).

Additionally, as per claim 17, the hopper (80) defines a base (end portion of bin (80) adjacent (59)) and includes a stack retainer means (55 and/or 59) extending from the base for aligning disks (16) in a vertical stack, the stack retainer means (55 and/or 59) includes more than one pawl (55 and/or 59) for holding lifted disks (16).

As per claim 18, wherein the servo motor includes a shaft (e.g., shaft upon which gear (78) resides), the linkage assembly includes a single arm (30) mounted on the shaft (e.g., that is arm (30) is coupled to the motor shaft in direct proximity thereof, and is this way can be

construed as broadly being "mounted on." Note that the term "mounted on" is seen not to require direct contact between the motor shaft and the arm (30).

Additionally, as per claim 21, a base having a position sensor (see COL. 5, lines 59-63), wherein as per claim 23, an optical sensor is provided.

As per claim 25, wherein the stack of disks (16) has a top and a bottom, and wherein the single disk (15) is added to the bottom of the stack (16).

As per claim 26, further comprising a conveyor (e.g., see COL. 3, lines 57-60).

As per claim 27, wherein the conveyor delivers disks to the memory storage device handling system (14) for the elevator pin (30, 35) to stack the delivered disks into a stack (16).

Additionally, as per claim 28, a plurality of pawls (55 and/or 59) for holding disks (15, 16), wherein the plurality of pawls (55 and/or 59) slide between a retracted position (FIG. 5) which enables the elevator pin (30, 35) to lift disks (15) into the stack (16) and an extended position (FIG. 4) for holding disks (16).

As per claim 29, further comprising a servo motor (76) and a linkage assembly (including 77, 78), wherein the linkage assembly is attached between the servo motor and the elevator pin (30, 35) for lifting the elevator pin (30, 35) in response to the servo motor (76).

As per claim 30, wherein the disks (16) are retained in a vertical stack (16) - FIG. 4.

As per claim 32, wherein the linkage assembly (77, 78) is a gear linkage assembly.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22, 24 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 5,415,519).

See the description of Lee et al. (US 5,415,519), *supra*.

Additionally, with regard to claims 22 and 24, although Lee et al. (US 5,415,519) remains silent with respect to the particular type of sensor (e.g., mechanical - claim 22; or magnetic - claim 24), Official notice is taken that mechanical and magnetic sensors as set forth in claims 22 and 24 of the instantly claimed invention are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the sensor (COL. 5, lines 59-63) of Lee et al. (US 5,415,519) with a conventional mechanical or magnetic sensor as is known.

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the sensor (COL. 5, lines 59-63) of Lee et al. (US 5,415,519) with a conventional mechanical or magnetic sensor as is known, in order to provide inexpensive and readily available sensors that function to identify a particular position of an object within the device of Lee et al. (US 5,415,519) as is well known, established and appreciated in the art.

As per claim 31, although Lee et al. (US 5,415,519) does not expressly show the linkage assembly as including at least one belt and at least one pulley, Official notice is taken that linkage assemblies inclusive of belts and pulleys are notoriously old and well known and ubiquitous in the art; such Officially noticed fact being capable of instant and unquestionable demonstration as being well-known.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the conventional gear assembly linkage of Lee et al. (US 5,415,519) with its respective art recognized equivalent of a belt and pulley system.

The rationale is as follows: one of ordinary skill in the art would have been motivated to substitute the conventional gear assembly linkage of Lee et al. (US 5,415,519) with its respective art recognized equivalent of a belt and pulley system since both are art recognized equivalents; providing a belt system reduces wear as opposed to a gear system and precludes the possibility of gear-teeth binding and undesired gear backlash as is known in the art; the substitution of the belt-and-pulley in lieu of the gear assembly would produce the same function, would not cause the device of Lee et al. (US 5,415,519) to operate in any different way, and would produce the same results. Thus, the substituting of one art recognized equivalent with another, in this specific situation, absent any evidence of criticality, is considered to be an obvious expedient, given the general knowledge available in the art.

***Allowable Subject Matter***

Claims 12-14, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-6 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

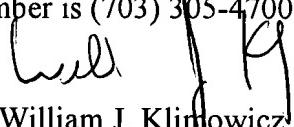
***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (703) 305-3452. The examiner can normally be reached on Monday-Thursday (6:30AM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

  
William J. Klimowicz  
Primary Examiner  
Art Unit 2652

WJK  
October 30, 2003